



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/040,975	12/28/2001	Richard H. Crump	10360-085001/13612BAUS01U	1741
32836	7590	09/22/2006	EXAMINER	
GUERIN & RODRIGUEZ, LLP 5 MOUNT ROYAL AVENUE MOUNT ROYAL OFFICE PARK MARLBOROUGH, MA 01752			NEURAUTER, GEORGE C	
			ART UNIT	PAPER NUMBER
			2143	

DATE MAILED: 09/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/040,975	Applicant(s) CRUMP ET AL.	
	Examiner George C. Neurauter, Jr.	Art Unit 2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2006.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,6,7,9,10 and 12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6,7,9,10 and 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f):
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2143

DETAILED ACTION

Claims 1, 3-4, 6-7, 9-10, and 12 are currently presented and have been examined.

Response to Arguments

Applicant's arguments filed 30 June 2006 have been fully considered but they are not persuasive.

The Applicant argues that Akahane or Applicant's admitted prior art do not teach the execution of a single IP stack to receive packets from any of the router interfaces. The Examiner is not persuaded by this argument.

Applicant admits:

"Router 10 also includes a routing table manager (RTM) 16 that performs central routing process and manages routing table 15. The central routing process comprises an IP (Internet Protocol) stack that runs router-executable processes, e.g., Unix processes. When a packet arrives at one of the interfaces 110, 120, 130, and 140, router 10 executes processes in the IP stack to perform specified functions according to the type of the packet." (paragraph 0003 of the specification)

Therefore, the Applicant readily admits that a router has an IP stack which, during execution, receives a packet that has arrived at one of the router interfaces, therefore, it would have been within the knowledge of one of ordinary skill in the

Art Unit: 2143

art at the time the invention was made to have such an IP stack to receive packets as admitted by the Applicant. Therefore, the combined teachings of Akahane and Applicant's admitted prior art disclose the claimed invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 3-4, 6-7, 9-10, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application

Art Unit: 2143

Publication 2001/0050914 over Akahane et al in view of Applicant's admitted prior art.

Regarding claim 1, Akahane discloses routing packets in a router having a plurality of interfaces through which the packets are received from a plurality of address domains and having a separate routing table dedicated to each address domain comprising identifying an appropriate routing table for received packets (paragraphs 0006 and 0007; see also paragraph 0016).

Akahane does not expressly disclose executing a single IP stack to receive packets from any of the router interfaces and to identify an appropriate routing table for received packets, however, Akahane does disclose determining the one routing table by a router that contains means for receiving and processing IP packets and identifying an appropriate routing table for received packets as shown above (see also paragraphs 0006, 0012, and 0039).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Akahane and Applicant's admitted prior art to execute a single IP stack to receive packets from any of the router interfaces and to identify an appropriate routing table for received packets since the Applicant has admitted that execute a single IP stack to receive packets from any of the router

Art Unit: 2143

interfaces and perform other router-executable processes is well known in the prior art (see paragraph 0003 within the specification) and, therefore, one of ordinary skill in the art would have found it obvious to modify the teachings of Akahane since it would have been within the level of knowledge of one of ordinary skill in the art at the time the invention was made to use a single IP stack to perform these processes as admitted by the Applicant and disclosed within the teachings of Akahane.

Regarding claim 3, Akahane and Applicant's admitted prior art disclose the method of claim 1.

Akahane discloses wherein a mapping array associates interfaces connecting to the same address domain with the same routing table. (paragraphs 0006 and 0007; see also paragraph 0016)

Regarding claim 4, Akahane and Applicant's admitted prior art disclose the method of claim 1.

Akahane does not expressly disclose wherein executing a single IP stack forwards a received packet according to the identified routing table when the received packet is a data packet and updates the identified routing table when the received packet is a control packet, however, Akahane does disclose determining the one routing table by a router that

Art Unit: 2143

contains means for receiving and processing IP packets as shown above (see also paragraphs 0006, 0012, and 0039).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Akahane and Applicant's admitted prior art to forward a received packet according to the identified routing table when the received packet is a data packet and update the identified routing table when the received packet is a control packet by a single IP stack since the Applicant has admitted that doing so is well known in the prior art for making necessary updates to a routing table when network topology changes (paragraphs 0003 and 0004) and, therefore, one of ordinary skill in the art would have found it obvious to modify the teachings of Akahane to include this subject matter in order to achieve the advantages as admitted by the Applicant and it would have been within the level of knowledge of one of ordinary skill in the art at the time the invention was made.

Regarding claim 6, Akahane and Applicant's admitted prior art disclose the method of claim 1.

Akahane discloses wherein each of the plurality of address domains represents a virtual private network. (paragraph 0006, specifically "Private IP addresses are often used in intra-

Art Unit: 2143

corporation networks...private IP address are used in the
VPNs..."

Claims 7, 9-10, and 12 are also rejected since these claims recite a router that contain substantially the same limitations as recited in claims 1, 3-4, and 6 respectively.

Conclusion

The prior art listed in the PTO-892 form included with this Office Action disclose methods, systems, and apparatus similar to those claimed and recited in the specification. The Examiner has cited these references to evidence the level and/or knowledge of one of ordinary skill in the art at the time the invention was made, to provide support for universal facts and the technical reasoning for the rejections made in this Office Action including the Examiner's broadest reasonable interpretation of the claims as required by MPEP 2111 and to evidence the plain meaning of any terms not defined in the specification that are interpreted by the Examiner in accordance with MPEP 2111.01. The Applicant should consider these cited references when preparing a response to this Office Action.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is

Art Unit: 2143

reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George C. Neurauter, Jr. whose telephone number is (571) 272-3918. The examiner can normally be reached on Monday through Friday from 9AM to 5:30PM Eastern.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2143

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

gcn



JEFFREY PWU
PRIMARY EXAMINER